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EARLY LEARNING IN THE HOME.

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RECOGNITION OF THE EDUCATIONAL PROBLEMS OF CULTURALLY AND SOCIALLY DEPRIVED CHILDREN TOGETHER WITH THE GROWING EVIDENCE OF THE EFFECTS OF EARLY CHILDHOOD DEVELOPMENT ON LATER EDUCATIONAL ACHIEVEMENT HAS LED TO THE PROPOSING OF LARGE-SCALE PROGRAMS TO ATTACK THESE PROBLEMS. IT SEEMS THAT SPECIAL NURSERY SCHOOL AND KINDERGARTEN PROGRAMS OFFER THE HIGHEST POTENTIAL PAYOFF. SUCH PROGRAMS ARE BEING DEVELOPED FIRST FOR DISADVANTAGED CHILDREN BUT WILL EVENTUALLY BE EXTENDED TO ALL. AN IMPORTANT QUESTION WHICH IS RAISED IS WHAT THE GOALS OF SUCH PROGRAMS SHOULD BE. SOME ANSWERS TO THE QUESTION POSED ARE AVAILABLE FROM VARIOUS TYPES OF RESEARCH INCLUDING LONGITUDINAL STUDIES, OTHER THEORETICAL AND EMPIRICAL STUDIES OF DEVELOPMENT, RESEARCH IN THE HOME ENVIRONMENT, AND RESEARCH ON PROCESSES IN INTELLECTUAL DEVELOPMENT. A GENERAL CONCLUSION FROM THIS RESEARCH IS THAT VERY EARLY DEVELOPMENT IS QUITE CRITICAL. THE LIKELIHOOD THAT THE PARENTS, PARTICULARLY THOSE OF CULTURALLY DEPRIVED CHILDREN, ARE ABLE TO ADEQUATELY SUPPLY THIS DEVELOPMENT SEEMS SLIGHT. THUS, THERE IS AN IMPORTANT TASK FOR THE SCHOOLS BOTH IN HELPING THE PARENTS AND IN SUPPLEMENTING THEIR EFFORTS. SOME MAJOR PROGRAM OBJECTIVES SUGGESTED BY THE RESEARCH ON CHILD DEVELOPMENT ARE (1) INCREASING THE RANGE OF THE CHILD'S PERCEPTIONS AND EXPERIENCES, (2) DEVELOPING AN EXTENDED AND ACCURATE USE OF LANGUAGE, (3) CREATING AN ENTHUSIASM FOR LEARNING THROUGH THE CHILD'S ABILITY TO MASTER LEARNING TASKS, (4) DEVELOPING THE CHILD'S THINKING AND REASONING SKILLS, AND (5) DEVELOPING PURPOSIVE LEARNING ACTIVITY IN THE CHILD. THIS PAPER WAS GIVEN AT THE FIRST B. J. PALEY LECTURE, UNIVERSITY OF CALIFORNIA AT LOS ANGELES, JULY 18, 1965. (DR)

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EARLY LEARNING IN THE HOME*

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The importance of the early years of childhood for all development that follows it has long been recognized by parents, by therapists, and by various specialists who have been actively concerned with the study of or the teaching of young children. More recently a number of educational research workers, including myself, have attempted to analyze the evidence on the relations between childhood development and growth and development in later years. In particular, the evidence of the effects of the childhood development on later educational achievement has been given a great deal of attention by the educational and scholarly community as well as by the popular press.

Undoubtedly these research reports - which are rather dry in their contents and style - have been seized upon because of their timeliness in relation to the educational problems of culturally and socially disadvantaged students. Here is a social problem of long duration which has come to the center of public interest because it is so evident in the large urban areas as a result of changing residential patterns. Furthermore, this is a social problem which has enormous implications for the long term welfare of submerged groups, and this has been recognized by the leaders of these groups as well as by political and community leaders. Impetus for vast educational and social reform is now emerging as a result of the social and political dynamics at the federal as well as local level.

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When the American public recognizes the existence of an important problem, it quickly converts the problem into dollars and funding programs. Such economic solutions to social problems are rapid but not necessarily effective. However, there is no doubt that the dollars do attract persons and organizations and that a great deal of energy becomes available as a result of the availability of resources. It is to be expected that many of the initial attempts to attack the educational problems of cultural deprivation will be ineffective. However, I am convinced that within a decade this problem will be effectively solved for a sizeable proportion of our children -- and especially so by the efforts at pre-school education.

There is a rapidly accumulating body of evidence that special programs of nursery school and kindergarten can do much to overcome some of the educational deficiencies commonly found in culturally deprived children. (Bloom, Davis, Hess, 1965). While considerable effort must be invested at all stages of the educational system to reduce the ravages of cultural deprivation, it is likely that the highest rate of "pay-off" will come from pre-school programs specially devised to meet the educational needs of socially disadvantaged children. Furthermore, such programs will be attractive to school systems because success at the pre-school level will enable the schools to maintain their present curricular and teaching practices with a minimum of alteration for these children. The tendency for educational systems to maintain stability at all costs is likely to mean that pre-school programs will become exceedingly popular. So popular, that I expect every urban school system to develop a rather elaborate pre-school program, especially for culturally

deprived children in the inner-city area. Please remember that I am not advocating pre-school programs as the only way of attacking the educational problems of cultural deprivation. I am merely predicting that pre-school programs will become the most popular (and, I suspect, effective) method of dealing with the educational problems of these children.

Until World War II, nursery schools were relatively rare, and with few exceptions were available only to children whose families could pay the relatively high fees. During the War years, public supported nursery schools were available where mothers were working and needed day-care provisions for their young children. Such programs were largely abandoned after the War. At present, about 2 per cent of 4 year old children are in nursery schools. Kindergartens have been more common and have generally been public supported or are a regular part of the school system whether it be private or public in support. However, even in 1964, only about 50 per cent of 5 year olds were enrolled in kindergartens.

As the federal government seeks its role in educational support, it is likely to find needs and areas of interest that have not been fully developed by the local and state educational support. One such area is the pre-school program for the culturally disadvantaged and poverty groups. Here is a program that is obviously needed but for which the community has not hitherto provided resources or facilities. It would appear to me that the federal funds will give heavy support to the creation of pre-school educational programs. I am not sure whether the continuation of these programs will depend on local, state, or federal programs. However, I am convinced that these pre-school programs will become a permanent part of the educational system and that not only will they

serve the culturally deprived, but they will also, in the near future, be available to all groups of children.

As we contemplate the rapid, and, I believe, inevitable encroachment on the "freedom" of the child by institutional arrangements, we must begin to ask ourselves a number of difficult questions. What is to be gained by providing pre-school experiences for culturally deprived children? What should be the goals of pre-school programs for culturally deprived children? What is to be gained by providing such experiences for all children? What is likely to be lost? What should be the goals of such programs for all children?

My own concern for these problems, in part, arises from the varying interpretations drawn from my own work on "Stability and Change in Human Characteristics". (Bloom, 1964). In part, I am concerned about some of the directions pre-school education is beginning to take. Finally, I am concerned that the powerful and desirable effects of pre-school education may be lost if our efforts are not systematically related to the achievement of what seem to me the desirable goals of such programs.

Let me point out a few features of emerging pre-school programs which I hope will not be continued too long.

What seems to me to be the most misdirected effort is the attempt by some parents and some pre-school programs to teach children to read, write, and do simple arithmetic in the nursery school and kindergarten. I do not doubt that it is possible to teach something of these school subjects to 4 and 5 year old children. I have no evidence that the learning of these subjects so early in the child's development will be harmful. What I do believe is that the learning experiences of these critical years should be directed to more important goals. These are the years in which the child should

"learn to learn" rather than learn the particular skills usually taught in the first or second grade of school. It is too simple to take the position that all that needs to be done in the cognitive domain is to take the curriculum of the first years of school and introduce them earlier. That it is good for children to learn to read at ages 6 and 7 does not mean that it is better to learn this skill at younger ages. I do not think we can justify taking over the precious years of childhood to give the children an earlier start on the three "Rs".

Another type of program which appears to be emerging is the brief crash program in which culturally deprived children are to be prepared for school by a 7 to 10 week summer program. Again, I do not believe this will be harmful to the children involved, but I have no evidence on this point. I suspect that very little is likely to emerge that is useful for these children. Even the best of these programs under the best of instructors is likely to be too little and too late. The major danger is that it may become a diversionary procedure which could get in the way of more carefully developed longer programs of a year or two. Who can argue against the possibility that 8 weeks of instruction can do the work of two years of pre-school instruction? What taxpayer would not prefer the shorter and cheaper solution? If projects such as "Headstart" are regarded as emergency efforts to be replaced by longer and more systematic efforts at pre-school education, then one cannot argue against a <u>little</u> in preference to <u>nothing</u>. What can be opposed is the attempt to find quick and cheap solutions to the serious problems of cultural deprivation.

Another effort that appears to me to be misguided is the notion that anyone can teach in these new nursery school programs. Because

of their "crash program" quality, there will be a great shortage of qualified teachers. Voluntary workers, elementary school teachers, and anyone who has had some higher education may be used as teachers in these new programs. While I am convinced that to do something is usually better than to do nothing, it doesn't seem to be much of a solution to regard any available adult as an appropriate pre-school teacher. We must begin to recognize that pre-school education is an exceedingly complex process and that the teachers at this stage must be very well prepared for this very important task. Furthermore, the teachers must be prepared in terms of the special goals and curriculum necessary for the stimulation of the cognitive and emotional development of these children. This is no place for the temporary volunteer or the well meaning but poorly prepared amateur. What may be justified as a temporary measure must not be continued on a permanent basis.

One other type of solution which is likely to seem to be attractive for schools working with culturally deprived children is to use the typical nursery school - kindergarten program with little or no alteration. Such pre-school programs have been relatively effective socializing agencies for middle-class children. The play and social activity which are central in the typical nursery school and kindergarten build on middle-class child rearing patterns, and they have been so effective because of the congruence between the values and efforts of the home and of the school. It is unlikely that these programs will be of great benefit to children who have come from homes which are very different from the typical middle-class home. In my view, the nursery school - kindergarten will be effective to the extent to which its methods and procedures take into consideration the prior development of these children and their special needs.

But, it is easy to criticize present efforts and to find fault with the many efforts to attack the very real and complex problems of cultural deprivation. How does one go about the process of finding more adequate solutions? And, why should we expect any effective solutions to emerge from pre-school programs for these children?

Some answers to these questions are available from several types of research; longitudinal studies, other theoretical and empirical studies of development, research in the home environment, and research on the processes involved in intellectual development.

Evidence from longitudinal studies

In the book, "Stability and Change in Human Characteristics", (Bloom, 1964), I attempted to summarize the results of approximately 1,000 longitudinal studies. These are studies in which the same individuals have been repeatedly measured or observed at different points in their development. A special advantage of these studies is that each measurement or observation can be made without being influenced by previous observations or measurements. Furthermore, the precision of each measurement can be estimated and the level of error can be taken into consideration when one attempts to summarize the evidence on a particular child or on a group of children.

One major finding that emerges from the longitudinal analysis of each characteristic is that the results of many studies are in very close agreement. When appropriate allowances are made for the sampling variations and the errors of measurements, longitudinal data gives such similar patterns of relationship for a particular characteristic that we can begin to think in terms of laws rather than trends. A single curve of development for each characteristic can be used as a very close approximation to the

results found in many different studies. Perhaps the major point of this is that the congruence of the many different quantitative findings permits us to draw powerful generalizations in what have hitherto been regarded as the "soft" sciences. This consistency of the data gives great promise that investigations of the underlying variables and determinants will yield increased understanding of the ways in which growth and development take place and of the forces which may affect these developments.

This work also reveals the typical growth curve for each characteristic. These curves differ from characteristic to characteristic, but for the most part the curves reveal that growth or change at some stages of development is much more rapid than at other stages. For some characteristics there is as much growth in a single year at one period in the individual's development as there is in eight to ten years at other stages in his development. It is especially noteworthy that for some of the most significant human characteristics the most rapid period of development appears to be in the first five years of life.

A major proposition which is tested throughout this book is that the environment in which the individual develops will have its greatest effect on a specific characteristic in the most rapid period of change and will have least effect on the characteristic in its least rapid period of change. This proposition, supported by a considerable amount of data and research, helps us to understand why the home and family are so important for the characteristics which develop most rapidly during the first five years of life. The evidence, as well as theory, makes it clear that change in many characteristics becomes more and more difficult with increasing age or development, and that only the most powerful environmental

conditions are likely to produce significant alterations in a stable characteristic at later stages of life.

Longitudinal evidence makes it very clear that the child does not come to the first grade of school as a tabula rasa on which teachers will indelibly imprint the educational values and competencies prized by the culture. Quite the contrary, the child enters first grade after having gone through perhaps the most rapid period of development which will take place throughout his life. In this book, the early development is described quantitatively with regard to about 30 human characteristics.

With regard to academic achievement, it is estimated that at least one-third of the development at age 18 has taken place prior to the child's entrance into the first grade of school. Educational growth is clearly not limited to what takes place in the school in grades one to twelve. The schools build on a foundation which has been largely developed in the home in the early years of life. Much of the variation in children at the beginning of first grade can be attributed to variations in the home environment. While hereditary influences undoubtedly are of significance in determining individual variation when environment is held constant, it is very clear that social class, ethnic, and racial differences in learning are, for the most part, to be accounted for by environmental differences.

Evidence from other empirical and theoretical investigations

The early environment is of crucial importance for three reasons. The first is based on the very rapid growth of selected characteristics in the early years and conceives of the variations in the early environment as so important because they shape these characteristics in their most rapid periods of formation. I have already referred in brief detail to the evidence for this.

However, another way of viewing the importance of the early environment has to do with the sequential nature of much of human development. Each characteristic is built on a base of that same characteristic at an earlier time or on the base of other characteristics which precede it in development. Hebb (1949) has pointed out the differences in activity and exploratory behavior of animals reared in very stimulating environments in contrast to those reared under very confining conditions. Such differences in initial behavior are of significance in determining the animal's activity and intelligence at later stages in its development. Erickson (1950) has described stages in the development of human beings and the ways in which the resolution of a developmental conflict at one stage will in turn affect the resolutions of subsequent developmental conflicts. The entire psychoanalytic theory and practice is based on a series of developmental stages (Freud, 1933; Freud, 1937; Horney, 1936; Sullivan, 1953) with the most crucial ones usually taking place before about age 6. The resolution of each stage has consequences for subsequent stages. Similarly, other more eclectic descriptions of development (Havighurst, 1953; Piaget, 1932; Murray, 1938; Gesell, 1945) emphasize the early years as the base for later development. All these theoretical as well as empirical descriptions of development point up the way in which the developments at one period are in part determined by the earlier developments and in turn influence and determine the nature of later developments. For each of these viewpoints, the developments that take place in the early years are crucial for all that follows.

A third reason for the crucial importance of the early environment and early experiences stems from learning theory. It is much easier to learn something new than it is to stamp out one

set of learned behaviors and replace them by a new set. The effect of earlier learning on later learning is considered in most learning theories under such terms as habit, inhibition, and restructuring. Although each learning theory may explain the phenomena in different ways, most would agree that the initial learning takes place more easily than a later one that is interfered with by an earlier learning. Observation of the difficulties one experiences in learning a new language after the adolescent period and the characteristic mispronunciations which tend to remain throughout life are illustrations of the same phenomena.

Several explanations for the difficulties in altering early learning and for the very powerful effects of the early learning have been advanced. Schachtel (1949) and McClelland (1951) believe that the learning which takes place before language development is so powerful because it is not readily accessible to conscious memory. Others, such as Dollard and Miller (1950), Mowrer (1950), and Guthrie (1935), would attribute the power of early learning to the repeated reinforcement and overlearning over time such that the early learning becomes highly stabilized. More recently, the experimental work on imprinting in animals by Hess (1959) demonstrates the tremendous power of a short learning episode at critical moments in the early history of the organism. Hess has demonstrated that ducklings at ages of 9 to 20 hours may be imprinted to react to a wooden decoy duck as a mother duck in a ten minute learning experience and that the duckling will thereafter respond to the decoy duck in preference to real mother ducks.

Although it is possible that each type of explanation is sound, especially as it applies to different learning phenomena, all three tend to confirm the tremendous power of early learning and its resistance to later alteration or extinction.

The power of early learning must still, for humans, remain largely an inference drawn from theory, from descriptive developmental studies, and from quantitative longitudinal studies. In many respects, the attempts to describe the learning process as it takes place in the first few years of life are still far from satisfactory. We know more about the early learning of experimental animals than we do about human infants. In this writer's opinion, the most vital research problems in the behavioral sciences are those centered around the effects of early learning and early environments on humans.

Research on the home environment

Much of the research on the relation between home environments and learning have been sociological in nature. These studies have grouped children on the basis of the education or occupation of the parents, social class or socio-economic status, race, or ethnic background and then related these classifications to the educational achievement of the children in school. Most of these studies reveal significant differences between extreme groups and correlations of the order of +.30 to +.50 between these sociological indices and measures of school achievement. While such studies do demonstrate some overall effects of the home environment, they are not very helpful to the schools because of the very weak statistical relations and because they do not give specific clues as to what the schools and parents can do to improve the situation for particular children.

A somewhat different approach to the study of the effects of home environment on intelligence and school learning was undertaken by Dave (1963) and by Wolf (1964). They began with the premise that it is what parents do rather than what they are that accounts for the learning development of children in the early years. Through

interviews and observational techniques they attempted to investigate the environmental process variables in the homes - that is the interactions between children and their parents.

Dave hypothesized on the basis of the literature that the home environment relevant to educational achievement might be studied in terms of six process variables:

1. Achievement Press - the parents' aspirations for the child and their interest in, knowledge of, and standards of reward for the child's educational achievement.
2. Language models - the quality of the parents' language and the standards they expect in the child's language.
3. Academic Guidance - the availability and quality of academic guidance and help provided in the home.
4. Activity in the home - stimulation provided in the home to explore various aspects of the larger environment.
5. Intellectuality - the intellectual interests and activity in the home.
6. Work habits - the degree of routine in home management and the emphasis on regularity in the use of space and time.

These six variables were broken down into more specific process characteristics and ratings were made on interview and observational data. When an overall index of the home environment was correlated with the results of a fourth grade battery of achievement tests, the correlation was found to be +.80. In general the correlations were highest with tests of word knowledge and reading, and they were lowest with spelling and arithmetic computation. These results suggest that the home has greatest influence on the language development of the child and his general ability to learn and least influence on specific skills primarily taught in the school.

This approach makes it clear that parents with relatively low levels of education or occupational status can provide very stimulating home environments for educational achievement. Dave's and Wolf's research demonstrates that it is what the parents do in the home rather than their status characteristics which are the powerful determinants in the home environment. They find that the relationship between these interactive processes and the parent's status is relatively low.

This approach is also suggestive for the division of labor between the home and the school. Three of the characteristics are likely to be highly modifiable in the home (achievement press, activity in the home, and work habits). That is, it is quite likely that parents can be encouraged and helped to alter these aspects of the home environment and, in turn, these are likely to affect the child's achievement in school. The other three characteristics (language models, academic guidance, and intellectuality in the home) are less likely to be modifiable in adults who are 30 years of age or older. It would seem that the school, and especially the pre-school, can do a great deal to supply these aspects of the environment where they are at a relatively low level in the home environment.

A related type of research on the home environment has been carried out by the Henrietta Szold Institute in Israel under the direction of Dr. M. Smilansky. Observational and interview studies of the parents and their interactions with their children reveal many differences between the homes of European origin and the homes of "Oriental" origin. This research makes it clear that the learning stimulation of the European children is at a much higher level than it is for the Oriental children. The

differences are most extreme with regard to the use of language, stimulation of questioning and thinking, and in the structuring of space and time.

The work of Bernstein and Hess emphasizes the role of communication and language as it affects the young child. They take the position that the behavior which leads to social, educational, and economic poverty is socialized in early childhood, that is, it is learned in the home. Bernstein (1961, 1962) has studied the way in which language structures and conditions what the child learns and how he learns. He finds that the forms of communication are related to the types of social interaction and that these determine not only the verbal behavior of the child but also the nature of his thinking and learning and his social behavior with authority figures as well as peers. Hess, Shipman and Jackson (1964) have followed up this work by observing the ways in which mothers teach their four year old children how to solve or understand selected problem tasks. Their research is beginning to reveal the ways in which the language interaction and the control system, which relates parent to child, restrict the number and kinds of alternatives for action and thought that are open to the culturally deprived child. This constriction reduces the child's tendency to reflect and to consider and choose among alternatives for speech and action. Hess and his colleagues believe that this constriction eventually leads to modes for dealing with problems which are impulsive rather than reflective, which emphasize the immediate rather than the future, and which handle ideas in disconnected rather than sequential patterns.

These types of research reveal the aspects of the home environment which seem to be most significant in affecting the

level of measured intelligence of the child as well as his school learning. The research makes it clear that there is a curriculum and a teaching style in each home and that it is the variations in this home curriculum and teaching which accounts for much of the differences in children's preparation for the learning tasks of the schools. In most general terms this curriculum may be analyzed in terms of its provisions for general learning, the models and help it provides for language development and social interaction, and the stimulation and concern it provides for achievement and learning on the part of the child. It is the adults in the home who serve to stimulate the child's intellectual development, and it is the adults in the home who determine the basic preparation of the child for later learning in the school.

The process of early development

While such empirical research does reveal some of the characteristics of the home environment which relate to and which influence the intellectual development of the child, it does not reveal the dynamic process by which the interaction between the child and the world about him takes place. Theoretical analyses and clinical types of investigations help to reveal something of the process by which intellectual development takes place in early childhood.

Beginning very early, the child comes to perceive many aspects in the world about him. This perceptual development takes place through the sensory modalities such as vision, hearing, touch, and even taste and smell. This development continues in more and more complex ways as the child approaches the beginning of formal schooling at age six. Perceptual development is stimulated by environments which are rich in the range of

experiences available; which make use of games, toys, and many objects for manipulation; and in which there is frequent interaction between the child and adults at meals, playtimes, and throughout the day. At the beginning of the first grade there are differences between culturally deprived and culturally advantaged children in the amount and variety of experiences they have had and in their perceptual development. Although differences in perceptual development are less evident by age nine, it is likely that the differences present at age six make for differences in school learning in the first few grades. The typical middle-class home provides a very complex environment for the child's early perceptual development, and this gives these children some advantage in the early years of school. (Jensen, 1965; Hunt, 1964; and Deutsch, 1963).

Linked to this perceptual development of the child is his linguistic development. As the child comes to perceive the world about him, he is able to "fix" or hold particular objects and events in his mind as he is given words or other symbols to "attach" to them. "Mama" and "Dadee" become representations of the important adults in his life. "Bottle," "cup," "dog," become symbols for appropriate objects in the environment. The adults in middle-class homes characteristically tend to use words so freely and easily that they teach them to the child at almost every opportunity. They encourage the child to say the word aloud, correct him when he says it incorrectly or applies it to the wrong object or event, and reward him when he uses the word or symbol correctly. This corrective feedback, which seems to be essential to the learning of language in relation to experience, is more readily available to the culturally advantaged child than it is to other children.

As the child attempts to communicate with others, and especially with his parents, he uses a relatively crude and limited language. In many middle-class homes, the child's language is extended by the parent's responses to his statements and questions. In culturally deprived homes, the parent is more likely to respond to the child with a monosyllable or to nod the head without using any words. The point of this is that one major difference between culturally deprived and more advantaged homes is the extension and development of the speech of children. Such differences have become very evident as a result of the studies done in various homes where parents are observed interacting with their children. (Casler, 1961; John, 1963; Hess, 1964, and Bernstein, 1964).

As a child develops more complex language, he becomes more able to perceive aspects of his environment, to abstract such aspects and to fix them in his memory, and to gain considerable control over his environment through the use of language. The frequent use of language in relation to his environment and the people in it enables the child to use words and language as tools for thought. Furthermore, the child becomes able to use language to express his own emotions, intentions, and desires. He is able to consider alternatives with regard to his emotions and to develop ways of delaying the gratification of his desires. Finally, the child develops his ability to compare, differentiate, and abstract aspects of his environment as well as his own thoughts and emotions. (Carroll, 1960; Luria, 1960; Vigotsky, 1962; Jensen, 1965; and Berlyne, 1963). Here again the child in the culturally advantaged home is given a great deal of opportunity to use language in these more complex ways, while the child in the disadvantaged home has less opportunity to develop in this way.

Put in other terms, the child in many middle-class homes is given a great deal of instruction about the world in which he lives, to use language to fix aspects of this world in his memory, and to think about similarities, differences, and relationships in this very complex environment. Such instruction is individual and is timed in relation to the experiences, actions, and questions of the child. Parents make great efforts to motivate the child, to reward him, and to reinforce desired responses. The child is read to, spoken to, and is constantly subjected to a stimulating set of experiences in a very complex environment. In short, he "learns to learn" very early. He comes to view the world as something he can master through a relatively enjoyable type of activity, a sort of game, which is learning. In fact, much of the approval he gets is because of his rapid and accurate response to this informal instruction in the home.

"Learning to learn" should not be confused with the early teaching of the child to read, to spell, and even to do simple arithmetic. Such coaching in the home is merely trying to do the school's task before the child enters public education. "Learning to learn" is a far more basic type of learning than coaching the child on school learning. It includes motivating the child to find pleasure in learning. It involves developing the child's ability to attend to others and to engage in purposive action. It includes training the child to delay the gratification of his desires and wishes and to work for rewards and goals which are more distant. It includes developing the child's view of adults as sources of information, and ideas, and also as sources of approval and reward. Through such development the child changes his self-expectations and his expectations of others.

While all of this is not absent in the culturally deprived home, it does not play such a central role in child rearing in such homes. The size of the family, the concern of the parents with the basic necessities of life, the low level of educational development of the parents, the frequent absence of a male parent, and the lack of a great deal of interaction between children and adults all conspire to reduce the stimulation, language development, and intellectual development of such children. (Ausubel, 1963; Deutsch and Brown, 1964; Keller, 1963; Milner, 1951; Goldberg, 1963).

If the home does not and cannot provide these basic developments, the child is likely to be handicapped in much of his later learning and the prognosis for his educational development is very poor. Such a child is likely to have difficulty and to be constantly frustrated by the demands of the typical elementary school program. His frustrations and disappointments in school are likely to have an adverse effect on his view of himself and his main desire must be to escape from the virtual imprisionment which school comes to represent for him.

The task of the schools

Ideally, the early intellectual development of the child should take place in the home. Efforts should be made to help parents learn how to teach their children. It is likely that parents can learn to develop higher and more realistic aspirations for their children's educational and vocational careers. Undoubtedly parents can be helped to stimulate their children to explore aspects of the environment and to raise questions about it. Here it is likely that television and neighborhood libraries can do a great deal. Parents can also be helped to develop better work habits in their children and to better organize the environment

with regard to space and time. This is likely to have some value for many parents and their children. However, the results of such efforts are not likely to be very effective when the total syndrome of poverty, broken homes, slum living, large families, and illiteracy all conspire against the intellectual development of the child.

All later learning is likely to be influenced by the very basic learning which has taken place by the age of five or six. If the intellective training of the child cannot be done adequately by the home and by the parents, it is the responsibility of the schools to insure that the culturally deprived children have as good a set of initial skills and intellectual development as children from more culturally advantaged homes. This position may be taken in the interest of the individual child. But also, this position may be taken to insure that the work of the schools for the next ten years will not be largely wasted because of what has taken place in the previous two or three years.

Careful but small scale studies in the U.S. and in other countries demonstrate that it is possible to bring culturally deprived children up to satisfactory stages of readiness for regular school learning. (Gray and Klaus, 1963; Smilansky, 1964; Brazziel and Terrell, 1962; Hess, 1964C; Baltimore Report in Research Council of Great Cities Program for School Improvement, 1964). If this can be done on a broader base, then the regular learning procedures of the schools which are now quite effective for the advantaged children are also likely to be effective for the culturally disadvantaged children.

Nursery schools must be organized to provide culturally deprived children with the conditions for their intellectual

development and for the learning-to-learn stimulation which is found in the most favorable home environments. This would mean that such nursery schools would need to be created to take care of approximately one-third of the children at ages three and four. Since this would involve about 3 million children and about 100,000 teachers (assuming that each teacher worked a double shift with 15 children in each shift), it would require an additional school expenditure of approximately one billion dollars per year.

Such a large scale addition to the work of the schools must involve financial and other help from the federal government if it is to be started at the level required and if it is to be accomplished without undue delay. The problem of cultural deprivation cuts across state lines and, in part, arises from migrations of people across state lines. Support for pre-school education must come from federal as well as other sources.

However, the problem of financial support is dwarfed by the problems of teacher training and by the problems of creating a nursery school which will provide the learning-to-learn stimulation so needed by culturally deprived children. These nursery schools cannot be patterned after the nursery schools commonly used for middle-class children. They must systematically provide for the intellectual development of the child. In these new types of nursery schools much of the learning can take place through games, concrete materials (blocks, toys, objects), and dramatic play. Teachers must be selected who can provide a supportive structured environment in which being read to, music, and art are enjoyable social experiences for the children.

While much must still be learned from the educational experiments being conducted, it is possible to outline some

of the major objectives for these special types of nursery schools. These objectives may be derived from the studies of home environments, from the theoretical and empirical literature on child development, and from the analysis of the differences observed between culturally deprived and culturally advantaged children in the early years of school. Some of the major objectives of nursery schools for culturally deprived children should be:

A. Stimulation of children to perceive aspects of the world about them and to fix these aspects by the use of language.

Every effort must be made to increase the range of perceptions of these children and to increase the range of their experiences. First hand experiences, books, pictures, including films and television, and carefully selected objects and other material must be part of the learning experiences of these children. These experiences and materials must be fixed in the child's memory by the use of language.

B. Development of more extended and accurate language.

There must be a great deal of language interaction between the children and the teacher. Much of this must be on an individual basis in which the child's comments are extended by the teacher's responses. The language patterns of the child should be developed at every opportunity and this should emphasize increasing mastery over standard speech forms as well as precision, complexity, and variety in the use of language.

C. Development of a sense of mastery over aspects of the immediate environment and an enthusiasm for learning for its own sake.

While particular types of competence must be developed,

the staff of the nursery school must not lose sight of the primary goal which is an interest in learning for its own sake. Every effort must be made to help the children enjoy the learning process and to develop skill in learning. Children will need to have learning tasks which they can master; they will need opportunities to explore an increasingly complex environment, and they will need much feedback and reinforcement.

D. Development of thinking and reasoning and the ability to make new discoveries for oneself.

Language and thought must be continually interrelated in the nursery school. Children must have many opportunities to make new discoveries and to be rewarded for making them. Problem tasks must be provided at the appropriate levels of difficulty, and the children should be given help and encouragement to attack and solve them. Insofar as possible, the problem tasks should be in the form of games and play which are pleasant and nonthreatening.

E. Development of purposive learning activity and ability to attend for longer periods of time.

As the child develops in the nursery school his activity should become more purposive, and he should be able to attend for longer and longer periods of time. In part, this objective will be a by-product of successful problem solving and language development. In part, this will emerge from a highly rewarding environment which continually encourages the child and which provides feedback and reinforcement as he engages in various activities.

It is to be hoped that the materials and methods for this new type of nursery school will in large part be developed out of the pilot programs now being tried in various parts of the U.S. (Hess, 1965). What would be especially helpful in developing new nursery school programs would be the creation of a national commission of teachers and other specialists to coordinate and to develop curricular guidelines, materials, and methods for this special type of nursery school. This commission should be charged with responsibility for experimenting with alternative approaches to these problems and for evaluating the effectiveness of such curricula with different groups of children.

The teachers for this new type of nursery school should be carefully trained for the specific set of teaching tasks they must assume. Essentially these teachers should be trained to do for many children what very good parents can do for a small number of their own children.

The parents must be sufficiently involved in the nursery school to understand its importance for their child and to give support and reinforcement to the learning objectives and tasks of these special schools. The parents should be so committed to this type of school that they are willing to do everything possible to insure the continuity of the child's school experiences. Ideally, the parents should learn the appropriate communication and instructional patterns so that they can do much of this on their own with their own children. One might foresee the time when most parents can provide such stimulating home environment for the cognitive development of their children that special nursery schools will not be widely needed. To this end, every effort should be made to have parents serve as part-time assistants and observers in these schools.

It is likely that these cognitively oriented nursery schools will do much to give culturally deprived children many of the intellective and language competencies and attitudes which they would otherwise not develop. However, if the regular primary school program is frustrating and punishing in its approach, it is quite likely that these children will regress to a lower level of school learning. Care must be taken to reinforce and support these children, especially in the early years of primary school. The point of this is that no one approach to the problems of cultural deprivation is likely to "solve" the learning problems of these children. In our work (Bloom, Davis, Hess, 1965) we have stressed the need for modification of educational procedures and curriculum at all levels. While this is a task of great magnitude, it is our view that only through such a multi-faceted approach can the educational problems of cultural and social deprivation be effectively attacked. The emphasis in this paper on the pre-school program should not lead the reader to regard the nursery school as the sole method of attacking these problems.

Nursery schools for all children

The development of special nursery schools for culturally and socially disadvantaged children will, if successful, result in nursery schools becoming an integral part of our educational system. From a program which at present reaches only about 2 per cent of the children, it is likely that nursery schools will in the near future reach a third or more of the 3 and 4 year old children.

It is to be expected that gradually these nursery schools will become available to all social and economic groups, since I cannot imagine a permanent system of public supported

nursery schools which will be confined to any single group in our society. If pre-school programs for child education do, in fact, become a regular part of the educational system, one might expect a variety of programs to result. The special needs of culturally deprived children can be met by a nursery school deliberately created for this purpose. However, for children who are given adequate intellectual stimulation in the home, quite another type of nursery school may be needed.

One can only speculate about the nature of such nursery schools. My own work on stability and change, and a vast body of theoretical and empirical literature, makes it clear that major personality characteristics are largely developed in the early years of childhood. The accidents of family and home conditions play a large role in determining these personality characteristics for good or evil. There are few social and environmental forces outside the home which directly influence personality development of young children.

It would seem to me that in these critical years of childhood, a system of nursery schools dedicated to the social and emotional development of the child could help each child get a good start toward mental health. Such an approach could do much to provide each child with the environment and adult support needed at these critical years.

The creation of such nursery school programs and the selection and training of the teachers for these nursery schools is an exceedingly complex task. We can only dimly see the outlines of such a program. Much more research is needed before we can have any assurance about exactly what will be necessary. In spite of the difficulties, I am convinced that a system of nursery schools to provide for the mental health of each child is possible. I am further convinced that it is in this direction that we will find the Great Society - rather than in our search of outer space.

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